

**Portege Z20t Detailed Product Specification<sup>1</sup>**

Model Name: Z20t-B2112	Part Number: PT15BU-00500N	UPC: 022265927922
<b>Operating System</b> <sup>2</sup>		
<ul style="list-style-type: none"> <li>Windows 7 Professional(Windows 8.1 Pro license and recovery media included)</li> </ul>		
<b>Processor<sup>3</sup> and Graphics<sup>4</sup></b>		
<ul style="list-style-type: none"> <li>Intel® Core™ M-5Y71 Processor <ul style="list-style-type: none"> <li>(4M Cache, up to 2.90GHz) with Intel® Turbo Boost Technology 2.0</li> </ul> </li> <li>Intel® AMT 10.0</li> <li>Mobile Intel® HD Graphics with dynamically allocated shared graphics memory</li> </ul>		
<b>Memory<sup>5</sup></b>		
<ul style="list-style-type: none"> <li>Configured with 8GB 1600MHz</li> <li>Memory is not user upgradable, factory installed only</li> </ul>		
<b>Storage<sup>6</sup></b>		
<ul style="list-style-type: none"> <li>256GB M.2 solid state drive(SSD)</li> </ul>		
<b>Display<sup>7</sup></b>		
<ul style="list-style-type: none"> <li>12.5" diagonal widescreen display at 1920 x 1080 native resolution (FHD) <ul style="list-style-type: none"> <li>Digitizer Touch Screen</li> <li>Anti-glare coating</li> <li>In-Plane Switching Technology(IPS)</li> <li>Native support for 1080p content</li> <li>16:9 aspect ratio</li> <li>LED backlit</li> </ul> </li> <li>Intel® Wireless Display Ready<sup>8</sup></li> </ul>		
<b>Sound</b>		
<ul style="list-style-type: none"> <li>Built-in stereo speakers</li> <li>Volume up/down buttons</li> <li>DTS Studio Sound™</li> </ul>		
<b>Input, Ports, and Expandability</b>		
<ul style="list-style-type: none"> <li><b>Keyboard Dock</b> <ul style="list-style-type: none"> <li>Spill-resistant LED backlit keyboard</li> <li>36Wh battery</li> <li>Touch pad pointing device with Windows 8 gesture control</li> <li>Security slot</li> <li>Accupoint pointing device</li> <li>Eject Button</li> <li>Ports <ul style="list-style-type: none"> <li>RGB</li> <li>HDMI®</li> <li>2 USB 3.0<sup>9</sup> ports</li> <li>10/100/1000 LAN port</li> <li>Docking Connector</li> </ul> </li> </ul> </li> <li><b>Tablet</b> <ul style="list-style-type: none"> <li>Active Digitizer Pen</li> <li>Emergency Pen</li> <li>Micro HDMI®</li> <li>Microphone/Headphone combination port</li> <li>1 micro USB 2.0 port</li> <li>Docking connector</li> <li>Micro SD Card Reader <ul style="list-style-type: none"> <li>Micro SD, Micro SDHC, Micro SDXC (shared slot may require adapter for use)</li> </ul> </li> </ul> </li> <li><b>Control Buttons:</b> <ul style="list-style-type: none"> <li>Power</li> <li>Volume Up/Down</li> </ul> </li> </ul>		
<b>Wireless and Connectivity</b>		
<ul style="list-style-type: none"> <li>Front 2MP FHD camera with microphone</li> <li>Back 5MP camera with auto-focus, digital zoom <ul style="list-style-type: none"> <li>Up to 1080p video capture</li> </ul> </li> <li>Intel® Ethernet Connection i218LM (10/100/1000)</li> <li>Intel® Dual-Band Wireless-AC 7265 Plus Bluetooth 4.0<sup>10</sup></li> <li>Intel® Wireless Display Ready<sup>11</sup> (WiDi Technology Capable)</li> </ul>		
<b>Physical Description</b>		
<ul style="list-style-type: none"> <li>Graphite Black Metallic</li> <li>Dimensions (W x D x H Front/H Rear): <ul style="list-style-type: none"> <li>12.2"x8.5"x0.83" (309x215.2x21.0mm)(tablet + dock/wo feet)</li> <li>12.2"x7.9"x0.35" (309x199.9x8.8mm)-tablet only</li> </ul> </li> <li>Weight<sup>12</sup>: <ul style="list-style-type: none"> <li>Starting at 3.5 lbs(1.59Kg) (with keyboard dock)</li> <li>Starting at 1.8 lbs (0.8Kg) (tablet only)</li> </ul> </li> </ul>		
<b>Power<sup>13</sup></b>		
<ul style="list-style-type: none"> <li>45W (19V 2.37A) 100-240V/50-60Hz AC Adapter</li> <li>3 cell/36Wh Lithium Ion battery pack ( in tablet)</li> <li>Battery Life Rating (measured by MobileMark™ Productivity 2012) <ul style="list-style-type: none"> <li>Included 3 cell battery: up to 9 hours, 6 mins ( tablet only)</li> </ul> </li> <li>3 cell/36Wh Lithium Ion battery pack ( in keyboard dock)</li> <li>Battery Life Rating (measured by MobileMark™ Productivity 2012) <ul style="list-style-type: none"> <li>Up to 17 hours, 20 minutes ( tablet/keyboard dock connected)</li> </ul> </li> </ul>		
<b>Toshiba EasyGuard<sup>®14</sup></b>		
<ul style="list-style-type: none"> <li><b>Protect &amp; Fix</b> <ul style="list-style-type: none"> <li>HALT Tested Design</li> <li>LCD Cover Face and Point pressure Resistant Design</li> <li>Spill Resistant Keyboard</li> <li>TOSHIBA PC Diagnostic Tool</li> <li>TOSHIBA PC Health Monitor</li> </ul> </li> <li><b>Secure</b> <ul style="list-style-type: none"> <li>Execute Disable Bit</li> <li>Device Access Control</li> <li>Multiple-Level Password Utilities</li> <li>Trusted Platform Module v1.2</li> </ul> </li> <li><b>Connect</b> <ul style="list-style-type: none"> <li>Bluetooth Stack for Windows</li> <li>Diversity Antenna</li> <li>Voice-over-IP Ready Design</li> <li>Wireless Communication On/Off</li> </ul> </li> <li><b>Optimize</b> <ul style="list-style-type: none"> <li>FN Shortcut Keys</li> <li>TOSHIBA eco Utility™</li> <li>TOSHIBA Recovery Media Creator</li> <li>TOSHIBA Zooming Utility</li> </ul> </li> </ul>		
<b>Software</b> <sup>15</sup>		
<ul style="list-style-type: none"> <li>Toshiba Software and Utilities <ul style="list-style-type: none"> <li>TOSHIBA Display Utility</li> <li>TOSHIBA eco Utility™</li> <li>TOSHIBA Password Utility</li> <li>TOSHIBA PC Health Monitor</li> <li>TOSHIBA Recovery Disc Creator</li> <li>TOSHIBA Service Station</li> <li>TOSHIBA Resolution+® Upconvert Plug-in for Media Player<sup>16</sup></li> </ul> </li> <li>Third-party Software <ul style="list-style-type: none"> <li>Adobe Reader</li> <li>Intel® Wireless Display<sup>17</sup></li> <li>DTS Studio Sound™</li> </ul> </li> <li>Special Offers and Trial Software <ul style="list-style-type: none"> <li>1 month trial for new Microsoft® Office 365 customers<sup>18</sup></li> <li>McAfee Live Safe™ 2014 - Trial</li> </ul> </li> </ul>		
<b>3 YEAR STANDARD LIMITED WARRANTY<sup>19</sup></b>		
<ul style="list-style-type: none"> <li>Includes International Limited Warranty for obtaining service when traveling outside the United States.</li> </ul>		
<b>Environmental Specifications<sup>20</sup></b>		
<ul style="list-style-type: none"> <li>This product is RoHS<sup>21</sup> compatible</li> <li>ENERGY STAR® Qualified</li> <li>EPEAT® Gold Rated</li> </ul>		
<b>Accessories</b>		

For additional and most updated accessories, please visit  
[www.accessories.toshiba.com](http://www.accessories.toshiba.com)

## Power

Part Number	Description
PA5192U-1ACA	Toshiba 45W Global AC Adapter

## Input Device

Part Number	Description
PA5129U-1EUC	Toshiba Digitizer Pen with Eraser
PA5229U-1EUC	Toshiba Portege Z20t Stylus Pen

## Expansion

Part Number	Description
PA3834U-1DV2	Toshiba USB Portable DVD SuperMulti Drive (Tray Load)
PA5221U-1DV2	Toshiba Portable SuperMulti Drive
PA5082U-1PRP	dynadock V3.0 Universal USB Docking Station
PA3927U-1PRP	dynadock U3.0 Universal USB Docking Station
PA5217U-1PRP	dyndock 4K Universal USB Docking Station

## Carrying Case

Part Number	Description
PA1523U-1UC3	Toshiba Ultrabook Envelope Sleeve(Fits up to 13.3" Ultrabook)
PA1454U-1SN2	Toshiba Neoprene Case, Black (Fits up to 13.3" Ultralight)
PA1444U-1CS2	Toshiba Envoy Ballistic Polyester Carrying Case (Fits up to 13.3" Ultralight)
PA1459U-1CL2	Toshiba Envoy Leather Carrying Case (Fits up to 13.3" Ultralight)
PA1540U-1ZPT	Toshiba Portege Z10t Capture Case with Shoulder Strap

## Bluetooth

Part Number	Description
PA5221U-1ETB	Toshiba Bluetooth Mouse B35

## Service Upgrades and Extensions

Toshiba offers many different enhanced services such as SystemGuard®, On-Site Repair, and ServiceExpress to provide additional support to your notebook PC. For a full description and complete list of programs and program terms and conditions, please visit [www.support.toshiba.com](http://www.support.toshiba.com).

## Subject to Change

While Toshiba has made every effort at the time of publication to ensure the accuracy of the information provided herein, product specifications, configurations, prices, system/component/options availability are all subject to change without notice. For the most up-to-date product information about your computer, or to stay current with the various computer software or hardware options, visit Toshiba's Web site at <http://www.support.toshiba.com>

## Return Policy

Notwithstanding anything to the contrary in any third party License Agreement or product documentation supplied with your PC, Toshiba America Information Systems, Inc. ("TAIS") does not accept the return of component parts, or bundled software, that have been removed from the PC system. Pro-rata refunds on individual PC components or bundled software, including the operating system, will not be granted. If you wish to return a complete PC system, contact the TAIS dealer where you purchased the product, and comply with the dealer's standard return policies and procedures.

Toshiba America Information Systems, Incorporated ("TAIS")

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Toshiba US website: <http://www.toshiba.com/us>

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### <sup>1</sup> **64-bit computing:**

64-bit computing requires that the following hardware and software requirements are met:

- 64-bit Operating System
- 64-bit CPU, Chipset and BIOS (Basic Input/Output System)
- 64-bit Device drivers
- 64-bit applications

Certain device drivers and/or applications may not be compatible with a 64-bit CPU and therefore may not function properly. See "Detailed Specs" for more information.

<sup>1</sup> **Product Series Legal Footnote.** The product specifications and configuration information are designed for a product Series. Your particular model may not have all the features and specifications listed or illustrated. For more detailed information about the features and specifications on your particular model, please visit Toshiba's Web site at [pcsupport.toshiba.com](http://pcsupport.toshiba.com).

**Product Offering Legal Footnote.** Toshiba America Information Systems, Inc. reserves the right to modify or withdraw this offer at anytime without notice

### <sup>2</sup> **Operating System.**

Also see **64-Bit Computing** Legal Footnote, if applicable.

Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of the computer, and may be completed by Internet or telephone (toll charges may apply).

Some software may differ from its retail version (if available), and may not include user manuals or all program functionality.

**Offers.** Offer terms, duration and product availability all subject to change without notice

<sup>3</sup> **Processor (Central Processing Unit).** Also see **64-Bit Computing Legal Footnote**, if applicable.

CPU performance in your computer product may vary from specifications under the following conditions:

1. use of certain external peripheral products
2. use of battery power instead of AC power
3. use of certain multimedia, computer generated graphics or video applications
4. use of standard telephone lines or low speed network connections
5. use of complex modeling software, such as high end computer aided design applications
6. use of several applications or functionalities simultaneously
7. use of computer in areas with low air pressure (high altitude >1,000 meters or >3,280 feet above sea level)
8. use of computer at temperatures outside the range of 5°C to 30°C (41°F to 86°F) or >25°C (77°F) at high altitude (all temperature references are approximate and may vary depending on the specific computer model – please visit the Toshiba website at [www.pcsupport.toshiba.com](http://www.pcsupport.toshiba.com) for details).

CPU performance may also vary from specifications due to design configuration.

Under some conditions, your computer product may automatically shut-down. This is a normal protective feature designed to reduce the risk of lost data or damage to the product when used outside recommended conditions. To avoid risk of lost data, always make back-up copies of data by periodically storing it on an external storage medium. Use your computer product only under recommended conditions. Read additional restrictions under "Environmental Conditions" in your product "Detailed Specs." Contact Toshiba Technical Service and Support for more information.

<sup>4</sup> **Graphics (Graphics Processing Unit).** GPU performance may vary depending on product model, design configuration, applications, power management settings and features utilized. GPU performance is only optimized when operating in AC power mode and may decrease considerably when operating in battery power mode.

**Total Available Graphics Memory** is the total of, as applicable, Dedicated Video Memory, System Video Memory and Shared System Memory. Shared System Memory will vary depending on system memory size and other factors.

<sup>5</sup> **Memory (Main System).** Part of the main system memory may be used by the graphics system for graphics performance and therefore reduce the amount of main system memory available for other computing activities. The amount of main system memory allocated to support graphics may vary depending on the graphics system, applications utilized, system memory size and other factors. Computers configured with a 32-bit operating system can address up to 3GB of system memory. Only computers configured with a 64-bit operating system can address 4 GB or more of system memory.

<sup>6</sup> **Solid State Drive/Flash Memory Capacity.** One Gigabyte (GB) means  $10^9 = 1,000,000,000$  bytes using powers of 10. The computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 GB =  $2^{30} = 1,073,741,824$  bytes, and therefore shows less storage capacity. Available storage capacity will also be less if the computer includes one or more pre-installed operating systems, such as Chrome OS System and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

<sup>7</sup> **Display.** Small bright dots may appear on your screen display when you turn on your PC. Your display contains an extremely large number of thin-film transistors (TFT) and is manufactured using high-precision technology. Any small bright dots that may appear on your display are an intrinsic characteristic of the TFT manufacturing technology. Over a period of time, and depending on the usage of the computer, the brightness of the screen will deteriorate. This is also an intrinsic characteristic of the screen technology. When the computer is operated on battery power, the screen will dim and you may not be able to increase the brightness of the screen while on battery power.

<sup>8</sup> **Intel® Wireless Display.** Copy protection technology, if any, associated with the content may prevent or limit viewing of content.

<sup>9</sup> **USB 3.0.** 5Gbps is the maximum theoretical interface transfer rate per the specifications of the Universal Serial Bus 3.0. Actual transfer rate will vary depending on your system configuration and other factors.

<sup>10</sup> **Wireless** May require purchase of additional software, external hardware, or services. Transmission speeds may vary. Certain optional features within the wireless-n specifications (if available on your system) may not be supported..

<sup>11</sup> **Intel® Wireless Display.** Copy protection technology, if any, associated with the content may prevent or limit viewing of content.

<sup>12</sup> **Weight.** Weight may vary depending on product configuration, vendor components, manufacturing variability and options selected.

<sup>13</sup> **Battery Life Rating.**

Measured by MobileMark® 2012 for models preinstalled with Microsoft® Windows 8.

- Benchmark rules for Mobile Mark™ 2012: Wireless connectivity = On, Screen brightness = 150nits, Predefined updated workloads.

Details of MobileMark® 2012 testing protocols are available at [www.bapco.com](http://www.bapco.com) MobileMark is a trademark of the Business Applications Performance Corporation.

Rating is for comparison purposes only, and does not indicate the battery life that will be obtained by any individual user. Actual battery life may vary considerably from specifications depending on product model, configuration, applications, power management settings and features utilized, as well as the natural performance variations produced by the design of individual components. The battery life rating is only achieved on the select models and configurations tested by Toshiba under the specific test settings at the time of publication and is not an estimate of a system's battery life under any conditions other than the specific test settings.

After a period of time, the battery will lose its ability to perform at maximum capacity and will need to be replaced. This is normal for all batteries.

<sup>14</sup> **EasyGuard.** Toshiba EasyGuard™ technology comprises a number of features some of which may or may not be available on a particular Toshiba notebook depending on the model selected. See [www.easymode.toshiba.com](http://www.easymode.toshiba.com) for detailed information.

<sup>15</sup> **Software.** Also see 64-Bit Computing Legal Footnote, if applicable.

Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of the computer, and may be completed by Internet or telephone (toll charges may apply).

Some software may differ from its retail version (if available), and may not include user manuals or all program functionality.

<sup>16</sup> **Upconverter/UpconversionTechnology (Resolution+® Technology)**. Viewing enhancements may vary depending upon content quality and display device capability/functionality/settings. Depending on the quality of the content, some video noise may be visible.

<sup>17</sup> **Intel® Wireless Display. Copy protection technology, if any, associated with the content may prevent or limit viewing of content.**

<sup>18</sup> **Microsoft® Office** Buy Microsoft® Office to use full-featured Office software on this PC.

The version of Microsoft® Office included in this computer is only available in and can only be activated within the region in which you purchased it. Certain Microsoft® software products included with this computer may use technological measures for copy protection. In such case, you will not be able to use the Product if you do not activate it with Microsoft. Activation may be completed by Internet or telephone (toll charges may apply). Product Activation procedures and Microsoft's privacy policy will be detailed during initial launch of the Product, or upon certain reinstallations of the software products or reconfiguration of the computer.

<sup>19</sup> **Warranty:** The terms and conditions of Toshiba's standard limited warranty are available at [www.warranty.toshiba.com](http://www.warranty.toshiba.com).

<sup>20</sup> **Temperature (Environmental) Conditions.** All temperature references are approximate and the performance of your computer may vary from specifications even when operating within the recommended temperature range.

	Operating	Non-operating
Temperature	5° to 35° C	-20° to 60° C
Thermal Gradient	15° C per hour (max)	20° C per hour
Relative Humidity (non-condensing)	20% to 80%	10% to 90%
Altitude (relative to sea level)	-60 to 3,000 metres	-60 to 10,000 metres
Shock	10G	60G
Vibration	0.5G	1.0G

<sup>21</sup> **RoHS.** This computer is compatible with European Union Directive 2011/65/EU, Restriction of the use of certain Hazardous Substances in electrical and electronic equipment (RoHS), which restricts use of lead, cadmium, mercury, hexavalent chromium, PBB, and PBDE. Toshiba requires its computer component suppliers to meet RoHS requirements and verifies its suppliers' commitment to meeting RoHS requirements by conducting component sampling inspections during the product design approval process.